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<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>		ATTORNEY'S DOCKET NUMBER 2115D002504/NPB U.S. APPLICATION NO. (If known, see 37 CFR 1.5) <b>10/553851</b>
INTERNATIONAL APPLICATION NO. PCT/US04/12375	INTERNATIONAL FILING DATE 22 April 2004 (22.04.2004)	PRIORITY DATE CLAIMED 23 April 2003 (23.04.2003)
TITLE OF INVENTION <b>INTEGRATED GLOBAL LAYOUT AND LOCAL MICROSTRUCTURE TOPOLOGY OPTIMIZATION APPROACH FOR SPINAL CAGE DESIGN AND FABRICATION</b>		
APPLICANT(S) FOR DO/EO/US <b>LIN, Chia Ying, et al.</b>		

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a submission under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a submission under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. ☒ The US has been elected (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
  - b. ☒ has been communicated by the International Bureau.
  - c. ☒ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
  - a. ☐ is attached hereto.
  - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
  - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ have been communicated by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A preliminary amendment.
14. ☒ An Application Data Sheet under 37 CFR 1.76.
15. ☐ A substitute specification.
16. ☐ A power of attorney and/or change of address letter.
17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.
18. ☐ A second copy of the published International Application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).

JC20 Rec'd PCT/PTO 20 OCT 2005

PTO-1390 (Rev. 07-2005)

Approved for use through 3/31/2007. OMB 0651-0021

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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U.S. APPLICATION NO. (if known) <b>10/553851</b> <small>(if known, see 37 CFR 1.5)</small>		INTERNATIONAL APPLICATION NO. <b>PCT/US04/12375</b>		ATTORNEY'S DOCKET NUMBER <b>2115D002504/NPB</b>	
20. Other items or information: Express Mail Transmittal (Label EV 717 340 550 US); Check in the amount of \$150.00; Formal Drawings showing Figs. 1-9 (9 pages); Form HDP-1449 citing 3 references (none enclosed) with ISR and Written Opinion of ISA; copy of Published International Application WO 2004/093657 A2; Return Receipt Postcard.					
The following fees have been submitted				<b>CALCULATIONS</b>	<b>PTO USE ONLY</b>
21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.492(a))..... \$300				\$ 300.00	
22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c))					
If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0				\$ 0.00	
All other situations..... \$200					
23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.492(b))					
If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0					
Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... \$100				\$ 0.00	
International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB..... \$400					
All other situations..... \$500					
<b>TOTAL OF 21, 22 and 23 =</b>				<b>300.00</b>	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
32 - 100 =	-68 /50 =		x \$250	\$ 0.00	
*Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).				\$ 0.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	20 - 20 =	0	x \$50	\$ 0.00	
Independent claims	2 - 3 =	0	x \$200	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$360	\$ 0.00	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				<b>\$ 300.00</b>	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.				150.00	
<b>SUBTOTAL =</b>				<b>\$ 150.00</b>	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				\$ 0.00	
<b>TOTAL NATIONAL FEE =</b>				<b>\$ 150.00</b>	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$ 0.00	
<b>TOTAL FEES ENCLOSED =</b>				<b>\$ 150.00</b>	
				Amount to be refunded:	\$
				Amount to be charged	\$

10/553851

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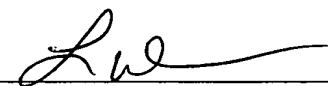
IC20 Rec'd PCT/PTO 20 OCT 2005

- a. ☒ A check in the amount of \$ 150.00 to cover the above fees is enclosed.
- b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees.  
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 08-0750. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

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United States of America

  
SIGNATURE

Linda M. DESCHERE  
NAME

34,811  
REGISTRATION NUMBER

Dated: 20 October 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
AS DESIGNATED/ELECTED OFFICE (DO/EO/US)

10/553851

Express Mail No.: EV 717 340 550 US

Date of Deposit: 20 October 2005

Application No.: Not yet assigned – US National Phase of PCT/US04/12375

International  
Filing Date: April 22, 2004

Applicant: Chia Ying LIN, et al.

Title: INTEGRATED GLOBAL LAYOUT AND LOCAL  
MICROSTRUCTURE TOPOLOGY OPTIMIZATION  
APPROACH FOR SPINAL CAGE DESIGN AND  
FABRICATION

Attorney Docket: 2115D-002504/NPB

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Mail Stop PCT  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

**EXPRESS MAIL TRANSMITTAL**

The following papers are being deposited with the United States Postal Service Express Mail Post Office to Addressee on 20 October 2005 and addressed for receipt by the United States Patent and Trademark Office:

1. Express Mail Transmittal (Label No. EV 717 340 550 US);
2. Check in the amount of \$150.00;
3. Transmittal Letter to the DO/EO/US Concerning a Filing Under 35 USC 371 (3 pages, in duplicate);
4. Application Data Sheet (3 pages);
5. Formal Drawings (Figs. 1-9) (9 pages);
6. Information Disclosure Statement w/ Form HDP-1449 citing 3 references (none enclosed), ISR and Written Opinion of ISA;
7. Copy of Published International Application WO 2004/093657 A2;
8. Return Receipt Postcard.

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